



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:
DALE E. GULICK

Serial No.: 10/045,117

Filed: November 1, 2001

For: MICROCOMPUTER BRIDGE FOR
REMOTE MANAGEABILITY

Group Art Unit: 2112

Examiner: C. KNOLL

Atty. Dkt. No.: 2000.051400

DECLARATION UNDER 37 C.F.R. § 1.131 OF MARK W. SINCELL

1. My name is Mark W. Sincell. I am a patent agent in the firm of Williams, Morgan & Amerson. I have personal knowledge of the facts stated herein.

2. On May 15, 2000, Williams Morgan & Amerson received a request from AMD's legal department to prepare a United States patent application for the invention described in invention disclosure form number TT4028. The invention disclosure form is signed by Dale E. Gulick, and it is dated January 28, 2000. See Exhibit A.

3. At some point after May 15, 2000, the invention disclosure form number TT4028 was reviewed and a draft patent application for the invention described in the invention disclosure form was prepared.

4. On July 27, 2001, an initial draft of the application was sent to Dale E. Gulick for review. See Exhibit B.

5. At some time after July 27, 2001, comments were received from the inventor Dale Gulick regarding the initial draft application. To the extent necessary, the application was revised and a revised copy of the application along with formal papers (assignment, declaration

and power of attorney) was sent to AMD for review and the possible execution of the formal papers by the inventor.

6. The formal papers for the application were signed on October 31, 2001 by inventor Gulick.

7. Upon receipt of the formal papers signed by Mr. Gulick, the application was filed on November 1, 2001, with the United States Patent and Trademark Office via Express Mail.

8. As further evidence of the diligence of the inventors and the attorneys and/or agents involved in the preparation and filing of the above captioned patent application, it is noted that the present application was prepared and filed as part of a group of 18 related applications, as indicated at line 13 on page 13 of the Patent Application. Dale E. Gulick is named as an inventor on 16 of the 18 related applications. For the Examiner's convenience, the list of related applications and their filing dates, as set forth in the Patent Application, is provided as Exhibit C.

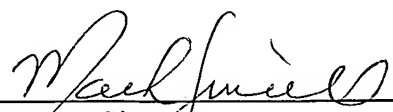
9. Drafts of the 16 related applications that named Dale E. Gulick as an inventor were sent to Mr. Gulick for review between the dates of March 9, 2000 and May 2, 2001.

10. The 18 related applications were filed with the United States Patent Office between April 7, 2000 and May 30, 2001.

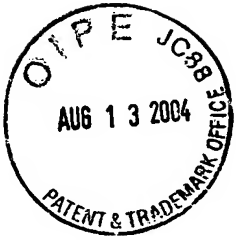
11. I understand that willful false statements and the like so made are punishable by fine or imprisonment, or both, and may jeopardize the validity of the application or any patent issuing thereon.

12. I declare under penalty of perjury that the foregoing is true and correct.

Date: 8/9/04



Mark W. Sincell



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DECLARATION UNDER 37 C.F.R. § 1.131 OF DALE E. GULICK

1. My name is Dale E. Gulick. I have personal knowledge of the facts stated herein.
2. I am currently employed with Advanced Micro Devices, Inc. in Austin, Texas. I am a named inventor on application Serial No. 10/045,117 entitled "Microcomputer Bridge for Remote Manageability."
3. Attached as Exhibit A is a copy of the invention disclosure form I prepared in Austin, Texas for the invention described in the above-referenced patent application. I prepared and signed the invention disclosure form on January 28, 2000, as indicated by the date adjacent my signature.
4. The attached invention disclosure form was provided with internal tracking number TT4028 by AMD's legal department, and it was sent to the law firm of Williams, Morgan & Amerson on or about May 12, 2000, with a request to prepare a United States patent application for the invention disclosed in the invention form.
5. From about March 9, 2000 to about May 2, 2001, I received drafts of 16 patent applications related to patent application Serial No. 10/045,117. I diligently reviewed these patent applications.

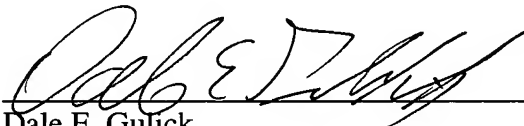
6. At sometime after July 27, 2001, I received a copy of an initial draft of the application for this case. See Exhibit B. I diligently reviewed the application and provided any necessary comments. Shortly thereafter, I received a final draft application and the associated formal papers (assignment, declaration and power of attorney).

7. I executed the formal papers for the application Serial No. 10/045,117 on October 31, 2001.

8. I understand that willful false statements and the like so made are punishable by fine or imprisonment, or both, and may jeopardize the validity of the application or any patent issuing thereon.

9. I declare under penalty of perjury that the foregoing is true and correct.

8/3/04
Date


Dale E. Gulick

12MY2000



5204 E. Ben White Blvd.
Austin, TX 78741
Tel (512) 385-8542

J. MIKE AMERSON
WILLIAMS, MORGAN & AMERSON
7676 HILLMONT, SUITE 250
HOUSTON, TX 77040

2000.051400

RECEIVED

MAY 15 2000

WILLIAMS, MORGAN & AMERSON

RE: Invention Disclosure TT4028

Entitled:
A PC CHIPSET ARCHITECTURE WITH AN EMBEDDED ASF MANAGEMENT PROCESSOR

Dear J. MIKE AMERSON:

Please prepare a US patent application for the subject invention disclosure and file the application in the USPTO within two months of this letter. A copy of the Invention Disclosure is enclosed.

Please follow the instructions set forth in AMD's DIRECTIONS TO OUTSIDE COUNSEL REGARDING PREPARATION AND PROSECUTION OF PATENT APPLICATIONS Version 1.0 dated May 1, 1996.

It is not necessary to prepare a PCT international application at this time. If one is later determined to be needed, AMD will so advise you.

If you have any questions or need additional information, please call me at 512-602-5964, or the responsible AMD Technology Law attorney, LOUIS A. RILEY at 512-602-2788.

Sincerely,

Samantha Cardona
Paralegal
Technology Law Department

Enclosure

cc:

GULICK, DALE E. 61682 (TX)

INVENTION DISCLOSURE
AMD CONFIDENTIAL

Legal Dept. Use:

ID# TT4028

Received _____

In Texas:

Return to M/S 562

Call x55964 for assistance

In California:

Return to M/S 68

Call x26542 for assistance

INVENTION IDENTIFICATION:

WORKING TITLE: A PC CHIPSET ARCHITECTURE WITH AN EMBEDDED ASF
MANAGEMENT PROCESSOR.

BRIEF DESCRIPTION AND/OR SKETCH OF INVENTION (you may submit copies of Engineering Notebook pages, reports or drawings as ATTACHMENTS and describe below):

SEE ATTACHED

Engineering Notebook No. _____ Page Numbers: _____ Number of Drawings _____

ADVANTAGES (Check all that apply):

- | | |
|--|---|
| <input type="checkbox"/> Lower Cost | <input type="checkbox"/> Improves Linearity |
| <input type="checkbox"/> Simplifies Manufacturing | <input type="checkbox"/> Improves Accuracy |
| <input type="checkbox"/> Fewer Parts | <input type="checkbox"/> Higher Operating Speeds |
| <input type="checkbox"/> Simpler Construction | <input type="checkbox"/> Improves Signal -to -Noise Ratio |
| <input type="checkbox"/> New Function | <input type="checkbox"/> Improves Efficiency |
| <input type="checkbox"/> Improves Reliability | <input type="checkbox"/> Improves Wear Characteristics |
| <input checked="" type="checkbox"/> New Technology | <input type="checkbox"/> Designs Around Existing Patent |
| <input type="checkbox"/> Solves the following problem(s) _____ | |

Other Advantages _____

GENERAL INFORMATION:

TECHNOLOGY to which the invention relates PC CHIPSETS

AMD PRODUCT or PROJECT NAME invention would be used in (if any) ZORAK

Government Dept (Army, Air Force, etc.) and Contract No. _____

PLEASE ESTIMATE:

Cost per unit \$ 10

Sales potential \$ 500m per 5 years

Product life (Number of years) 10 - PERMANENT

Product/Process No. _____

DOCKETING

MAY 12 2000

ENTERED

LIST DATES OF:

First written description of invention / /
 First Drawing / /
 First Oral Disclosure / / Disclosed to (name) _____
 First Disclosure (i.e. product announcement, external presentation, sampling,
 offer for sale, etc.) / / Specify _____
 Non-Disclosure Agreement: / /
 Device First Completed: / /
 First Successful Test: / / Made by (Name) _____ Tested by (Name) _____
 Prototype Location: _____
 First Published: / / Publication Name: _____
 Introduction of product using invention / /

INVENTOR INFORMATION:

Inventor Signature and Date Dale S. Durbail 1/28/00
 Inventor's Printed Name DALE GULICK
 Employee # 61682 Extension 55.02 Home Telephone 263-7693 Citizenship USA
 Home Address 11715 ASTORIA DR ASTORIA, TX 78733
 Mailstop 535 Dept # 7952 Division Name PPD Supervisor Name HEYE VP Name HEYE

Co-Inventor Signature and Date _____
 Co-Inventor's Printed Name _____
 Employee # _____ Extension _____ Home Telephone _____ Citizenship _____
 Home Address _____
 Mailstop _____ Dept # _____ Division Name _____ Supervisor Name _____ VP Name _____

Co-Inventor Signature and Date _____
 Co-Inventor's Printed Name _____
 Employee # _____ Extension _____ Home Telephone _____ Citizenship _____
 Home Address _____
 Mailstop _____ Dept # _____ Division Name _____ Supervisor Name _____ VP Name _____

If there are additional co-inventors, list on separate sheet and check here ☐

WITNESSED BY:

I have read and understood this disclosure and read and signed each page of the attachments:

Witness 1 Signature _____ Date _____

Printed Name and Employee # _____

Witness 2 Signature _____ Date _____

Printed Name and Employee # _____

PATENT DEPARTMENT USE ONLY

I have reviewed and understood this Invention Disclosure, and it (is) (is not) recommended to AMD for review for patenting at this time. It should be given (high) (normal) (low) priority.

BY (Signature) _____ Date _____

PRINT NAME _____ Employee Number _____

Autonomous Management Processor (AMP) – IP

- 1) An IOH with an embedded ASF engine
 - a) Supports both master and slave mode
 - b) 8051-based ASF engine in the IOH (not on the NIC)
- 2) Basic embedded 8051 architecture
 - a) IOH with embedded controller
 - b) Connection to an integrated Ethernet core
 - c) Modifications to the Ethernet core to route ASF messages to the ASF buffers
 - d) x86 -> 8051 communications structure, including interrupts
 - e) 8051 -> x86 communications structure, including interrupts
 - f) P&P configuration space for ASF
 - g) 8051 code stored in on-chip ROM, and shadowed from BIOS ROM into on-chip RAM – also running directly out of BIOS ROM
 - h) 8051/IOH control of system RESET and power supply based on RMCP commands
 - i) Resources in RTC well, 8051 in suspend well
- 3) Use of the AMP for both ASF and ACPI functions
 - a) embedding a controller in the chipset that is ACPI chapter 13 compliant
 - b) Using the AMP for both functions
 - c) System with both general x86 -> 8051 interface and a chapter 13 compliant interface
 - d) 8051 calling SMI-based x86 routines
- 4) Watchdog Timer/ASF system state determination (interpreting WDT timeouts in the context of system status (various BIOS boot states, etc.))
- 5) Hardware interlock that prevents an RMCP Reset or power down or power cycle from happening when the CPU is not hung. Needs to be a write-once initialization option. Tied into the WDT.
- 6) Hanging a smart card reader off of the AMP. Also biometric input devices.
- 7) SMI trap on reset and power down commands. Receipt of the command causes an SMI with a vector in the SEM trap register. The SMI code executes the command if it determines it to be valid. It also sets a timer = 1 second + 1second, -0.001. If the timer expires before being reset by the SMI code – reset can only happen from within SMM – the command is executed by the AMP hardware.
- 8) 8051 code structure
 - a) Master control loop
 - b) Polling task
 - c) SMBus emulation task
 - d) ASF slave mode support
 - e) Incoming Push mode sensor messages on the SMBus
 - f) Address Resolution Protocol
 - g) Packet construction/decomposition
- 9) Embedded controller firmware structure with a hardware errant task termination mechanism
 - a) Hardware timer
 - b) All tasks having a clean-up and exit call
 - c) Makes errant tasks non-fatal
 - d) Task ID and sequence number

WILLIAMS, MORGAN & AMERSON, P.C.

7676 HILLMONT, SUITE 250, HOUSTON, TX 77040
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FILE: 2000.051400

July 27, 2001

VIA FEDERAL EXPRESS : 329 8845 523

Dale E. Gulick
AMD, Inc.
5204 E. Ben White Blvd., M/S 535
Austin, TX 78741

RE: *U.S. Patent Application Entitled. MICROCOMPUTER BRIDGE FOR REMOTE
MANAGEABILITY*

Inventors: Dale E. Gulick

Your Ref.: TT4028; Our Ref.: 2000.051400

Dear Dale:

Attached is the draft application for the above-referenced matter. Please provide me with your comments at your earliest convenience. Please spend sufficient time reviewing the entire application so that you understand the content of the application, including each of the claims. You should make sure that the application enables one skilled in the art to make and use the invention and that it discloses the best mode of which you are aware for carrying out the invention.

If the application is inaccurate or incomplete, please mark your changes directly on the application itself and return it to me for revision. Please provide any and all feedback directly to my attention as soon as possible.

In reviewing the application, and especially the claims, keep in mind any relevant prior art of which you are aware. It is important that the claims accurately define your invention and that the claims distinguish over the prior art. If any prior art comes to your attention now or during the pendency of the application, please send it to me.

Attn: Mr. Dale E. Gulick

July 27, 2001

Page 2

We would like to take this opportunity to address several important matters:

I. INFORMATION DISCLOSURE STATEMENT

As we have discussed, a duty of candor and good faith toward the Patent Office rests on the inventors and on every other individual who is substantively involved in the preparation or prosecution of a patent application. All such individuals have a duty to disclose to the Office known information that may be material to the patentability of a pending claim. Such information is material to patentability when: (1) it establishes, by itself or in combination with other information, a *prima facie* case of unpatentability; or (2) it refutes, or is inconsistent with a position the applicant takes in (a) opposing an argument of unpatentability relied on by the patent examiner, or (b) asserting an argument of patentability.

An Information Disclosure Statement should therefore be filed in the Patent Office within about three months of the filing date of the patent application to comply with this duty of disclosure, listing material publications or pertinent information of which you are aware. This includes:

- (a) products or services in public use or on sale in this country prior to your U.S. filing date;
- (b) all related material (including international patent applications) published in this country or a foreign country prior to your U.S. filing date;
- (c) any related U.S. patents; and
- (d) any pertinent applications published prior to your filing date.

We request that you supply us with copies of all material prior art references of which you are aware and any other information which should be disclosed to the Patent Office. We would like to file the Information Disclosure Statement within three months of the filing date, so we need you to supply the copies to us about a month prior to that time. Please feel free to call me if you have any questions as to what should be included.

II. CONTINUING DUTY OF CANDOR

We would like to emphasize that the duty of candor does not cease once the Information Disclosure Statement has been filed. The duty remains throughout examination of the patent application. Therefore, if any additional information of relevance comes to your attention during examination of this patent application, it is important that you advise us immediately so that such information can be submitted to the Patent Office.

Attn: Mr. Dale E. Gulick
July 27, 2001
Page 3

Furthermore, for as long as any patent that may be granted on this patent application is of value to you, we recommend that you keep us advised of any relevant information that comes to light. We can then consider such and advise on options such as limiting the claims to avoid such prior art by filing an application for a reissue patent or an application for reexamination.

III. DEVELOPMENTS AND IMPROVEMENTS

It is important that you advise us promptly of any developments or improvements that may affect the uses or value of this invention. You should insure, in particular, that you advise us of such developments or improvements before any disclosure or public use has occurred. If such developments or improvements are of sufficient importance, it may be possible, and indeed advisable, to take immediate steps to secure specific protection for such developments or improvements. This could be done by filing a continuation-in-part patent application, or by filing a new independent patent application, both of which probably require administrative approval.

IV. EXAMINATION

In general, an Examiner reviews applications in the order in which they are received. A first office action may be issued within a year, although the time period may vary.

V. MARKING

In commercial exploitation of this invention, it is advisable to mark articles and literature relating to the invention to indicate that a patent application is pending. The notation "Patent Pending" or "Patent Applied For" may be used in connection with any product covered by any claim of the application. This notation may also be used in any advertising, business literature or scientific publication. Products or methods relating to claims in the patent application may be conveniently identified in footnotes as being subjects of one or more pending patent applications. It is usually advisable, however, not to disclose the serial number or filing date of the patent application while it is still pending.

VI. CORRESPONDING PATENT PROTECTION IN OTHER COUNTRIES

The United States and many other countries are parties to an international treaty called the Paris Convention. Under this treaty you may file a corresponding patent application in any of these other countries and claim the benefit of your United States filing date, provided that the corresponding application is filed within one year from the day on which your United States application was filed. Certain events might have occurred or may occur that will require corresponding foreign applications to be filed before the end of this one-year convention period.

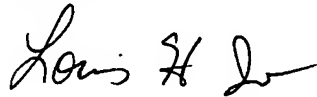
WILLIAMS, MORGAN & AMERSON, P.C.

Attn: Mr. Dale E. Gulick
July 27, 2001
Page 4

Unless you have concluded that you do not want any corresponding foreign patent applications, you should take this matter up with us as soon as possible. We can then discuss the benefits, requirements, filing procedures, and costs of foreign coverage.

If we can be of further assistance, or if you have any questions concerning the patent application, the preparation of an Information Disclosure Statement, or any of the above topics, please contact us at your convenience.

Regards,

A handwritten signature in black ink, appearing to read "Louis H. Iselin".

Louis H. Iselin, Ph.D.

LHI/kd

Enclosure

cc: Mr. Paul Drake (w/encl.)
Ms. Mary Paul (w/o encl.) [Firm]
Mr. Shawn Smith (w/o encl.) [Firm, Docketing]



Related Applications for Patent Application 10/045,117

U.S. Patent Application No. 09/544,858, entitled "Method And Apparatus For Extending Legacy Computer Systems", filed on April 7, 2000, whose inventor is Dale E. Gulick.

U.S. Patent Application No. 09/852,372, entitled, "Secure Execution Box and Method," filed on May 10, 2001, whose inventors are Dale E. Gulick and Geoffrey S. Strongin.

U.S. Patent Application No. 09/852,942, entitled, "Computer System Architecture for Enhanced Security and Manageability," filed on May 10, 2001, whose inventors are Geoffrey S. Strongin and Dale E. Gulick.

U.S. Patent Application No. 09/853,395, entitled, "Enhanced Security and Manageability using Secure Storage in a Personal Computer System," filed on May 11, 2001, whose inventors are Geoffrey S. Strongin and Dale E. Gulick.

U.S. Patent Application No. 09/853,446, entitled, "Resource Sequester Mechanism," filed on May 11, 2001, whose inventor is Dale E. Gulick.

U.S. Patent Application No. 09/853,447, entitled, "Integrated Circuit for Security and Manageability," filed on May 11, 2001, whose inventors are Dale E. Gulick and Geoffrey S. Strongin.

U.S. Patent Application No. 09/853,225, entitled, "System Management Mode Duration and Management," filed on May 11, 2001, whose inventors are Geoffrey S. Strongin and Dale E. Gulick.

U.S. Patent Application No. 09/853,226, entitled, "Mechanism for Closing Back Door Access Mechanisms in Personal Computer Systems," filed on May 11, 2001, whose inventor is Geoffrey S. Strongin.

U.S. Patent Application No. 09/854,040, entitled, "Cryptographic Randomness Register for Computer System Security," filed on May 11, 2001, whose inventor is Dale E. Gulick.

U.S. Patent Application No. 09/853,465, entitled, "Cryptographic Command-Response Access to a Memory in a Personal Computer System," filed on May 11, 2001, whose inventor is Geoffrey S. Strongin.

U.S. Patent Application No. 09/853,443, entitled, "Protection Mechanism for Biometric Input Data," filed on May 11, 2001, whose inventors are Dale E. Gulick and Geoffrey S. Strongin.

U.S. Patent Application No. 09/853,437, entitled, "Personal Computer Security Mechanism," filed on May 11, 2001, whose inventors are Geoffrey S. Strongin and Dale E. Gulick.

U.S. Patent Application No. 09/853,335, entitled, "Asset Sharing between Host Processor and Security Hardware," filed on May 11, 2001, whose inventors are Geoffrey S. Strongin and Dale E. Gulick.

U.S. Patent Application No. 09/853,234, entitled, "Interruptable and Re-enterable System Management Mode Programming Code," filed on May 11, 2001, whose inventors are Geoffrey S. Strongin and Dale E. Gulick.

U.S. Patent Application No. 09/871,084, entitled, "Locking Mechanism Override and Disable for Personal Computer ROM Access Protection," filed on May 30, 2001, whose inventors are Frederick D. Weber and Dale E. Gulick.

U.S. Patent Application No. 09/871,511, entitled, "Monotonic Counter Mechanism for Computer System Security," filed on May 30, 2001, whose inventors are Frederick D. Weber and Dale E. Gulick.

U.S. Patent Application No. 09/870,890, entitled, "Secure Booting of a Personal Computer System," filed on May 30, 2001, whose inventors are Geoffrey S. Strongin, Dale E. Gulick, and Frederick Weber.

U.S. Patent Application No. 09/870,889, entitled, "External Locking Mechanism for Personal Computer Memory Locations, filed on May 30, 2001, whose inventors are Geoffrey S. Strongin, Dale E. Gulick, and Frederick Weber.